

The present invention is directed to a high density interconnection device primarily for use in connection with interfacing peripheral devices to an electronic device such as a computer or other suitable electronic device. According to the embodiments of the present invention, the structural configuration of the novel high density interconnection device is advantageous over the prior art in that it is relatively small, stackable, accommodates many input/output signals and intuitively informs a user of the proper interface. The novel high density audio/video input/output interconnection device includes a high density connector block, a high density connector and a plug. The high density connector block has a plurality of jacks located on the outer surface thereof such as a S-video input jack, a S-video output jack, a composite video input jack, a composite video output jack, a digital audio output jack, a right channel audio input jack and left channel audio input jack. The high density connector is commonly connected to the plurality of jacks by a first cable, so that the suitable portable devices may be interfaced with a computer or other electronic device. The plug is connected to the high density connector via a second cable for right and left channel audio output.

The novel high density connector block includes a housing having a top, bottom, front, back, first side and second side surfaces. The first and second side surfaces are disposed on opposite sides of a longitudinal axis. The plurality of jacks are disposed on the first and second side surfaces in one embodiment and a recessed portion is formed in the first side surface. In other embodiment a projecting portion is formed on the second side surface as extending therefrom. In one aspect of the present invention, the audio jacks disposed on the first and second side surfaces are defined in a first plane and the video jacks disposed on the first and second side surfaces are defined in a second plane. The first and second planes are substantially parallel to one another such that the audio and video jacks are offset from one another.

The aforementioned and related advantages are provided by the high density audio/video input/output interconnection device as defined in claim 1, which calls for, among other things:

“ . . . a plug for stereo audio output interconnected to the high density connector for interface with a computer.”

Such structure and its associated functionality is not disclosed in *Greenberg, et al.* or in view of *Pearlman*. Therefore, claim 1 cannot be obvious over *Greenberg, et al.* in view of *Pearlman*. Nor has the Examiner provided recitation where the entirety of the aforementioned limitation is disclosed in *Greenberg, et al.* or *Pearlman*. Consequently, the obviousness rejection of claim 1 by the Examiner is improper under 35 U.S.C. § 103(a) and MPEP § 706.02.

In rejecting claim 1, the Examiner has seemingly ignored the aforementioned limitation and broadly asserted that such ignored limitation is disclosed in *Greenberg, et al.* More specifically, on page 2, paragraph 1 of the Office Action, the Examiner states that “Greenberg’s device discloses a block or housing having a longitudinal axis including a top surface, bottom surface, front surface, back surface and side surfaces such that the first and second side surfaces are oppositely disposed; a plurality of jacks, for connection with peripheral devices, disposed on the first and second sides surfaces; a recessed portion at 130 formed on the first side surface having at least one of the plurality jacks disposed therein; a projection portion at 132(a) 132(b) formed on the second side surface having at least one of the plurality of jacks disposed therein; a cable (541) associate with the back surface.” The Examiner submits that such showing discloses the aforementioned limitation without providing an indication of where on the *Greenberg, et al.* device the “plug for stereo audio output interconnected to the high density connector for interface with a computer” is disclosed. The Examiner has not discussed the disclosure, teachings or suggestions of *Pearlman* in view of the aforementioned limitation. Accordingly, the aforementioned limitation of claim 1 is not disclosed in *Greenberg, et al.* or *Pearlman*.

Thus, as the Examiner has not pointed to a portion of *Greenberg, et al.* or *Pearlman* or disclosed the entirety of the aforementioned limitation, the Applicant submits the obviousness rejection is improper 35 U.S.C. § 103(a) or MPEP 706.02 as each and every limitation of claim 1 is not disclosed in *Greenberg, et al.* or *Pearlman* or any combination thereof.

Consequently, as the Examiner has seemingly ignored a principal limitation of claim 1, and *Greenberg, et al.* and *Pearlman* do not disclose a high density audio/video input/output interconnection device having the structure and functionality as defined in claim 1,

the Applicants submit *Greenberg, et al.* in view of *Pearlman* does not render the invention as defined in claim 1 obvious. Accordingly, reconsideration of rejection of claim 1 is respectfully requested.

Claims 2, 3 and 5 directly or indirectly depend upon include all limitations of claim 1 and are allowable at least for the reasons associated with claim 1. Accordingly, reconsideration of the rejection of claims 1-3 and 5 is respectfully requested.

B. Rejection of claims 7-8 and 10-18

Claim 7 is directed to a novel high density audio/video input/output connector block. Claim 7 includes the following limitations, *inter alia*:

“ . . . a projecting portion formed on the second side surface having at least one of the pluralities of jack disposed therein; and: . . . ”

which is not disclosed in *Greenberg, et al.* or *Pearlman*. As discussed in greater detail above in Section II(A), *Greenberg, et al.* is directed to a source coupler for multi-media projection display system having first and second side surfaces oppositely disposed and recessed portions formed in the second side surfaces having at least one of the plurality of jacks disposed therein. However, the aforementioned limitation and its associated functionality are not disclosed in *Greenberg, et al.* or *Pearlman*. Therefore, *Greenberg, et al.* in view of *Pearlman* cannot render claim 1 obvious. Nor has the Examiner provided recitation to where the entirety of the aforementioned limitation is disclosed in *Greenberg, et al.* or *Pearlman*. Consequently, the obviousness rejection of claim 7 by the Examiner is improper under 35 U.S.C. § 103(a) and MPEP § 706.02.

In rejecting claim 7, the Examiner asserts that *Greenberg, et al.* discloses a projecting portion formed on the second side surface. More specifically on page 2, paragraph 1 of the Office Action, the Examiner states that “ . . . a projecting portion at 132(a) 132(b) formed on the second side surface having at least one of the plurality of jacks disposed therein; . . . ” discloses the aforementioned limitation. However, Applicants respectfully submit that the structure identified by reference no. 132(a) in FIG. 3 and the structure identified by reference no. 132(b) in FIG. 5 are parallel with respect to one another and in fact define the second surface

as claimed, from which the recessed portion is defined. Consequently, as correctly interpreted, *Greenberg, et al.* does not disclose, teach or suggest the aforementioned limitation. Moreover, *Greenberg, et al.* states that cover 142 is rotatable and includes semicircular flange portion 152 which extends regularly from the center cap portion 150 and is complimentary with approximately one-half of circular flange 138. A semi-cylindrical sidewall cover 156 depends downwardly from flange portion 152 to cover about one-half of the cylindrical sidewall 132 of base 130. See *Greenberg, et al.* column 8, lines 32-40. The sidewall cover 156 is disposed immediately adjacent the second side surface and each of the jacks disclosed in *Greenberg, et al.* are disposed recessed with respect to the first or second surfaces. Accordingly, *Greenberg, et al.* teaches away from the aforementioned limitation.

Thus, as the Examiner has not pointed to a portion of *Greenberg, et al.* or *Pearlman* that discloses the entirety of the aforementioned limitation, the Applicants submit that the obviousness rejection is improper under 35 U.S.C. § 103(a) and MPEP 76.02 in that each and every limitation of claim 7 is not disclosed in *Greenberg, et al.* or *Pearlman*. Consequently, as *Greenberg, et al.* or *Pearlman* do not disclose a high density audio/video input/output connector block having the structure and functionality as defined in claim 7, the Applicants submit that *Greenberg, et al.* or *Pearlman* do not render the invention as defined in claim 7 obvious. Accordingly, reconsideration of rejection of claim 7 is respectfully requested.

Claims 8 and 10-18 directly or indirectly depend upon and include all of the limitations of claim 7 are allowable at least for the reasons associated with claim 7. Accordingly, reconsideration of the rejection of claims 7, 8 and 10-18 is respectfully requested.

C. Rejection of Claims 19-25

Claim 19 is directed to a novel high density audio/video input/output connector block. Claim 19 includes the following limitations, *inter alia*:

“... at least one audio jack disposed on the first and second sides defined in a first planes; and,

at least one video jack disposed on the first and second sides defined in a second plane, where that the first and second planes are substantially parallel such that audio and video jacks are offset”

which are not disclosed in *Greenberg, et al.* or *Pearlman*. Consequently, neither *Greenberg, et al.* nor *Pearlman* renders the invention as defined in claim 1 obvious. The Examiner has also not provided recitation of where the entirety of the aforementioned limitation is disclosed in *Greenberg, et al.* or *Pearlman*. Consequently, the obviousness rejection of claim 19 by the Examiner is improper under 35 U.S.C. §103(a) and MPEP § 706.02.

In rejecting claim 19, the Examiner has seemingly ignored the aforementioned limitation and broadly asserted that such ignored aforementioned limitations are disclosed in *Greenberg, et al.* or *Pearlman*. Accordingly, the aforementioned limitation of claim 19 has not disclosed in *Greenberg, et al.* or *Pearlman*. The Examiner has also not pointed to a portion of *Greenberg, et al.* or *Pearlman* that discloses the entirety of the aforementioned limitation. The Applicants submit that the obviousness rejection is improper under 35 U.S.C. §103(a) and MPEP § 706.02 as each and every limitation of claim 19 is not disclosed in *Greenberg, et al.* or *Pearlman*. Consequently, as the Examiner has seemingly ignored a principal limitation of claim 19 and *Greenberg, et al.* or *Pearlman* do not disclose a high density audio/video input/output connector block having the structure and functionality as defined in claim 19, the Applicants submit that *Greenberg, et al.* in view of *Pearlman* does not render the claim 19 obvious. Accordingly, reconsideration of the rejection of claim 19 is respectfully requested.

Claims 20-25 directly or indirectly depend upon include all the limitations of claim 19 and are allowable for the reasons associated with claim 19. Accordingly, reconsideration of the rejection of claims 19-25 is respectfully requested.

III. Allowable Subject Matter and New Claims

The Applicants wish to thank the Examiner for indicating that the invention as defined in claims 26-28 are allowable over the art of record, and that the invention as defined in claims 4, 6 and 9 would be allowable if re-written in independent form.

Based on the above amendments and remarks, the Applicant submits that claims 1-28 are now in proper condition for allowance and such action is earnestly solicited.

The Commissioner is hereby authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-0441 or any payment in connection with this communication, including any fees for extension of time, which may be required. The Examiner is invited to call the undersigned if such action might expedite the prosecution of this application.

Respectfully submitted,

By: Michael J. Turgeon
Michael J. Turgeon
Registration No. 39,404

Date: August 22, 2002

VEDDER, PRICE, KAUFMAN &
KAMMHOLZ
222 N. LaSalle Street
Chicago, IL 60601
PH: (312) 609-7716
FAX: (312) 609-5005